

What is claimed is:

- Sub C12 →
1. A metal halogen electrodeless illumination lamp comprising a microwave generator coupled via a coupling means with a microwave cavity which contains a discharge bulb, and a microwave screen its function being performed by some part of the microwave cavity walls, which is transparent to optical radiation, said discharge bulb containing a fill mixture of metal halogens which emits visible optical radiation featuring a molecular spectrum, immediately when excited with a high frequency discharge, and an inert gas, of which said fill mixture of metal halogens includes halides of Sn and Al.
2. The metal halogen electrodeless illumination lamp according to claim 1, wherein said halogen component of halides is one of chlorine, iodine or bromine.
3. The metal halogen electrodeless illumination lamp according to claim 1, wherein the fill mixture of metal halogens includes SnBr_2 and AlI_3 .
4. The metal halogen electrodeless illumination lamp according to claim 1, wherein the fill mixture of metal halogens includes SnI_2 and AlBr_3 .
5. The metal halogen electrodeless illumination lamp according to claim 1, wherein the fill mixture of metal halogens further includes bismuth halide.
6. The metal halogen electrodeless illumination lamp according to
- Sub C13 →

claim 5, wherein said halogen component of halides is one of chlorine, iodine or bromine.

7. The metal halogen electrodeless illumination lamp according to claim 5, wherein the fill mixture of metal halogens includes SnI_2 and AlBr_3 .

8. The metal halogen electrodeless illumination lamp according to claim 5, wherein the fill mixture of metal halogens includes SnBr_2 and AlI_3 .

10 9. The metal halogen electrodeless illumination lamp according to claim 5, wherein the fill mixture of metal halogens includes BiI_3 .

15 10. The metal halogen electrodeless illumination lamp according to claim 1, wherein the amount of a fill substance is such that it would allow to maintain the gas vapors pressure in the range of 1~20 atm at working temperature of the lamp.

20 11. The metal halogen electrodeless illumination lamp according to claim 1, wherein, as the inert gas, argon or xenon is used.

12. The metal halogen electrodeless illumination lamp according to claim 1, wherein the discharge bulb additionally contains a small amount of metals such as Zn, Na, Li or their compounds.

25 13. A metal halogen electrodeless illumination lamp comprising a

Sub A4
20

microwave generator coupled via a coupling means with a microwave cavity which contains a discharge bulb, and a microwave screen its function being performed by some part of the microwave cavity walls, which is transparent to optical radiation, said discharge bulb containing a fill mixture of metal halogens which emits visible optical radiation featuring a molecular spectrum, immediately when excited with a high frequency discharge, and an inert gas, of which said fill mixture of metal halogens includes bismuth halide.

14. The metal halogen electrodeless illumination lamp according to claim 13, wherein said halogen component of halides is one of chlorine, iodine or bromine.

15. The metal halogen electrodeless illumination lamp according to claim 13, wherein the fill mixture of metal halogens includes BiI_3 .

16. The metal halogen electrodeless illumination lamp according to claim 13, wherein the discharge bulb contains a mixture of halides additionally including compounds of Sn and Al.

17. The metal halogen electrodeless illumination lamp according to claim 16, wherein said halogen component of halides is one of chlorine, iodine or bromine.

18. The metal halogen electrodeless illumination lamp according to claim 16, wherein the fill mixture of metal halogens includes BiI_3 .

Sub A5
29

19. The metal halogen electrodeless illumination lamp according to claim 16, wherein the fill mixture of metal halogens includes SnBr_2 and AlI_3 .

20. The metal halogen electrodeless illumination lamp according to claim 16, wherein the fill mixture of metal halogens includes SnI_2 and AlBr_3 .

21. The metal halogen electrodeless illumination lamp according to claim 13, wherein the amount of a fill substance is such that it would allow to maintain the gas vapors pressure in the range of 1~20 atm at working temperature of the lamp.

22. The metal halogen electrodeless illumination lamp according to claim 13, wherein, as the inert gas, argon or xenon is used.

23. The metal halogen electrodeless illumination lamp according to claim 13, wherein the discharge bulb additionally contains a small amount of metals such as Zn, Na, Li or their compounds.